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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,332	10/30/2003	Steven A. Mestemacher	AD6928APAF	2532

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E I DU PONT DE NEMOURS AND COMPANY
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WILMINGTON, DE 19805

EXAMINER

HOOK, JAMES F

ART UNIT PAPER NUMBER

3754

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

7P

Office Action Summary	Application No. 10/699,332	Applicant(s) MESTEMACHER, STEVEN A.	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6-28-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4 and 8-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Spohn (478) or Spohn (335). The patents to Spohn disclose the recited hose for use with fuels, of which gas and oil are known fuels, where such is comprised of at least one polyamide and at least one grafted fluoropolymer having polar functionality, where the fluoropolymer is incompatible with the polyamide wherein the polyamides are in a continuous matrix phase and the fluoropolymer is a discontinuous phase, where the polyamide can take the form of some of those listed in claims 3 and 4, the temperature of the melting points of the polyamide material appear to overlap with applicants range, however, such would also be an inherent property to the material, where the polyamides would inherently have the same melting point without the claiming of any structure to alter the known polyamides set forth in Spohn and claim 3 of applicants application, the amount of fluoropolymer is also overlapping the range of claim 10, carboxylic moieties are grafted to the fluoropolymer, the pipe is inherently going to be flexible, and the use of such for a line pipe or casing liner are considered merely intended use, where the hose of Spohn is capable of the same uses and such is merely intended use, where more layers can be provided, and

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Spohn sets forth in one embodiment that a plurality of thin layers can be utilized which suggests the multitude of thin parallel overlapping layers, however, should such be proven not the case, the claims would still be rejected under 35 USC 103 as set forth below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spohn (335) or Spohn (478) in view of Subramanian. The patents to Spohn as set forth above disclose all of the recited structure with the exception of stating the thickness of the plurality layers, and is unclear whether the plurality of thin fluoropolymer layers are within a matrix in the same way as the spherical fluoropolymers are. The patent to Subramanian discloses the recited pipe, sheet, or tube where the use of such with oil or gas is merely intended use, where the article of Subramanian is capable of use with these materials, comprising at least one polyolefin, at least one polyamide incompatible with the polyolefin, and at least one alkylcarboxyl substituted polyolefinic compatibilizer where the polyolefins are in a continuous matrix phase and the polyamides are present in discontinuous distributed phase in the form of a multitude of thin, substantially parallel and overlapping layers of material embedded in the continuous phase and further where the compatibilizer is stated as being provided

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throughout the structure which inherently would include between layers, the polyolefin used are polyethylene, polypropylene or polybutylene, the alkylcarboxyl substituted compatibilizer is selected from polyolefins that have carboxylic moieties attached to a polyolefin backbone or chains, dicarboxylic acids can be used to graft to the polyolefin, the pipe can be a flexible pipe as such is inherent to the materials used, and the use of such for a line pipe or casing liner are merely intended use where the structure is capable of use in these fields as well, where in column 3, lines 35-55 discuss that the particles of discontinuous phase can be formed as spheres or as a plurality of flat flakes, where such can be in the range of 0.5-50 micrometers in thickness. It would have been obvious to one skilled in the art to modify the shape of the discontinuous phase in Spohn (335) or Spohn (478) to be flat in shape rather than the spherical shapes set forth in the Spohn references as such is an equivalent shape to form the discontinuous particles in a matrix as suggested by Subramanian where such would provide a layer that is more of a barrier layer than the spherical shapes could provide thereby saving money by reducing failure costs.

Claims 1-4 and 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerbow in view of Spohn (335). The patent to Kerbow discloses the recited tube formed of a melt mix blend of polyamide and flat flakes of grafted fluoropolymer of 50 micrometers in thickness, with polar functionality from carboxylic treatment which would create moieties. The patent to Kerbow discloses all of the recited structure with the exception of setting forth that the melt mix blend with polyamide would be provided as a matrix to the fluoropolymer in a continuous phase, and the types of polyamides to be

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used, where the use of the tube for any specific use is merely intended use where the tube of Kerbow is capable of use as a line pipe or liner. The patent to Spohn discloses the structure set forth above and it would have been obvious to one skilled in the art to modify the structure of Kerbow by forming the melt mix blend with a matrix of polyamide, such as those set forth in applicants claims 3 and 4, as suggested by Spohn, where Spohn is teaching that the melt mixing of polyamide with particulate grafted fluoropolymer would form a polyamide matrix phase and a continuous phase, where such would be a stronger material and less apt to fail prematurely thereby saving money.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spohn (335) or Spohn (478) in view of Subramanian as applied to claims 1-4 and 8-18 above, and further in view of Stoeppelmann. The patents to Spohn as modified disclose all of the recited structure with the exception of adding plasticizer, lubricating agent, and stabilizer to the blend of materials. The patent to Stoeppelmann discloses that it is old and well known in the art to provide additives to mixes of polyamides and fluoropolymers such as plasticizers, stabilizers, and lubricants to make the polyamide material have more desirable properties. It would have been obvious to one skilled in the art to modify the polyamide mix in Spohn as modified by providing lubricants, stabilizers, and plasticizers as suggested by Stoeppelmann where such would make the resulting material have more desirable properties to allow for easier working and forming of objects such as tubes from the mix material as such would reduce production costs thereby saving money.

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Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerbow in view of Spohn (335) as applied to claims 1-4 and 8-18 above, and further in view of Stoeppelmann. The patents to Kerbow as modified disclose all of the recited structure with the exception of adding plasticizer, lubricating agent, and stabilizer to the blend of materials. The patent to Stoeppelmann discloses that it is old and well known in the art to provide additives to mixes of polyamides and fluoropolymers such as plasticizers, stabilizers, and lubricants to make the polyamide material have more desirable properties. It would have been obvious to one skilled in the art to modify the polyamide mix in Kerbow as modified by providing lubricants, stabilizers, and plasticizers as suggested by Stoeppelmann where such would make the resulting material have more desirable properties to allow for easier working and forming of objects such as tubes from the mix material as such would reduce production costs thereby saving money.

Conclusion

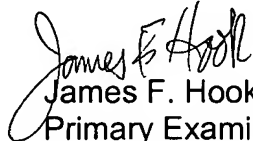
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Fukushi, Katsaros, Akkapeddi, Hsich, Spohn(482 and 671), Franosch, and Funaki disclosing state of the art hoses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James F. Hook
Primary Examiner
Art Unit 3754

JFH